



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application

Inventor(s): Taylor et al.

Appln. No.: 10/798,732

Confirm. No.: 4986

Filed: March 11, 2004

Title: ROBOT VACUUM WITH INTERNAL MAPPING
SYSTEM

PATENT APPLICATION

Art Unit: 1746

Examiner:

Customer No. 23910

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8

I hereby certify that this correspondence is being deposited in the United States Postal Service with sufficient postage as first class mail in an envelope addressed to **Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450**, on August 17, 2004.

(Signature)

Teri Muir

Signature Date: August 17, 2004

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.56

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

It is requested that the information identified in this statement be considered by the Examiner and made of record in the above-identified application. This statement is not intended to represent that a search has been made or that the information cited in the statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56. If this is a continuation, divisional or continuation-in-part application, it is understood that the Examiner will consider all information which was considered by the Office in a parent application. MPEP §609. Such information therefore is not listed herein unless it is desired that the information be printed on a patent issuing from the subject application.

Enclosed with this statement are the following:

- ☒ Form PTO-1449. The Examiner is requested to initial the form and return it to the undersigned in accordance with M.P.E.P. §609.
- ☒ The present application is being/was filed after June 30, 2003. In accordance with the pre-official gazette waiver of 37 CFR 1.98 (a)(2)(i) posted at: pac/dapp/opla/preognotice/idswouscopies.htm, copies of cited U.S. patents and publications are not enclosed. However, copies of cited foreign patent documents and non-patent literature are enclosed in accordance with 37 CFR 1.98(a)(2), as still required, except for those items designated by an asterisk (*), which were previously submitted by the applicant in a parent application, from which benefit under 35 U.S.C. §120 is claimed, with an *Information Disclosure Statement* submitted in the parent application which complies with the

September 8, 2000 or subsequent revision of 37 C.F.R. §1.98(a-c), as allowed under 37 C.F.R. §1.98(d)(1).

- The present application was filed prior to June 30, 2003. A copy of each cited document as required by 37 C.F.R. §1.98 is enclosed, except for those items designated by an asterisk (*), which were previously submitted by the applicant in a parent application, from which benefit under 35 U.S.C. §120 is claimed, with an *Information Disclosure Statement* submitted in the parent application which complies with the September 8, 2000 or subsequent revision of 37 C.F.R. §1.98(a-c), as allowed under 37 C.F.R. §1.98(d)(1).
- If any of the cited/submitted documents is in a foreign language, a concise explanation of relevance is provided pursuant to 37 C.F.R. §1.98(a)(3)(i). For foreign language documents cited in a search report by a foreign patent office, the requirement for a concise explanation of relevance is satisfied by the submission herewith of an English language version of the search report. MPEP §609A(3). If a written English-language translation of a non-English language document, or portion thereof, is within the possession, custody or control of, or is readily available to any individual designated in §1.56(c), a copy of the translation accompanies this statement, 37 C.F.R. §1.98(a)(3)(ii), and satisfies the requirement for a concise explanation of relevance, MPEP §609A(3).
- ***PTA Statement under 37 C.F.R. §1.704(d).*** Each item of information contained in the *Information Disclosure Statement* was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in §1.56(c) more than thirty days prior to the filing of the *Information Disclosure Statement*.

This statement should be considered because:

√ **37 C.F.R. §1.97(b).** This statement qualifies under 37 C.F.R. §1.97, subsection (b) because:

- (1) It is being filed within three months of the filing date of an application other than a continued prosecution application under § 1.53(d);
-- OR --
- (2) It is being filed within 3 months of entry of a national stage;
-- OR --
- (3) It is being filed before the mailing date of the first Office Action on the merits,
-- OR --
- (4) It is being filed before the mailing date of the first Office Action after the filing of a Request for Continued Examination under 37 C.F.R. §1.114.

— **37 C.F.R. §1.97(c).** Although it may not qualify under subsection (b), this statement qualifies under 37 C.F.R. §1.97, subsection (c) because:

- (1) It is being filed before the mailing date of a FINAL Office Action, a Notice of Allowance, or an action that otherwise closes prosecution in the subject application, whichever occurs first.

-- AND (check at least one of the following) --

— (1) It is accompanied by a STATEMENT as set forth in 37 C.F.R. §1.97(e).

-- OR --

— (2) It is accompanied by the \$180 fee set forth in 37 C.F.R. §1.17(p).

— **37 C.F.R. §1.97(d).** Although it may not qualify under subsection (b) or (c), this statement qualifies under 37 C.F.R. §1.97, subsection (d) because:

(1) It is being filed on or before payment of the Issue Fee;

-- AND --

(2) It is accompanied by a STATEMENT as set forth in 37 C.F.R. §1.97(e);

-- AND --


(3) It is accompanied by the \$180 fee set forth in 37 C.F.R. §1.17(p).

✓ **Fee Authorization.** The Commissioner is hereby authorized to charge any deficiencies or credit any overpayment to Deposit Account No. 06-1325. A duplicate copy of this authorization is enclosed.

Respectfully submitted,

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Date: August 17, 2004

By: 
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Form PTO-1449

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICEAttorney Docket Number
SHPR-01360USMSerial/Patent Number
10/798,732Applicant/Patent Owner
TaylorFiling/Issue Date
March 11, 2004Group Art Unit
1746*Information Disclosure Statement*
BY APPLICANT
(Use several sheets if necessary)

U.S. PATENTS

Examiner Initial	Patent Number	Issue Date	First Named Inventor	Class	Subclass	Filing Date
	D 471,243	03/04/03	Cioffi et al.			
	4,674,048	06/16/87	Okumura			
	4,700,427	10/20/87	Knepper			
	4,706,327	11/17/87	Getz et al.			
	4,782,550	11/08/88	Jacobs			
	4,962,453	10/09/90	Pong et al.			
	4,977,639	12/18/90	Takahashi et al.			
	5,012,886	05/07/91	Jonas et al.			
	5,023,444	06/11/91	Ohman			
	5,095,577	03/17/92	Jonas et al.			
	5,109,566	05/05/92	Kobayashi et al.			
	5,111,401	05/05/92	Everett Jr. et al.			
	5,148,573	09/22/92	Killian et al.			
	5,208,521	05/04/93	Aoyama			
	5,220,263	06/15/93	Onishi et al.			
	5,276,618	01/04/94	Everett Jr.			
	5,279,972	01/18/94	Heckenberg et al.			
	5,284,522	02/08/94	Kobayashi et al.			
	5,293,955	03/15/94	Lee			
	5,307,273	04/26/94	Oh et al.			
	5,309,592	05/10/94	Hiratsuka			
	5,321,614	06/14/94	Ashworth			

U.S. PATENTS

Examiner Initial		Patent Number	Issue Date	First Named Inventor	Class	Subclass	Filing Date
		5,341,540	08/30/94	Soupert et al.			
		5,402,051	05/28/95	Fujiwara et al.			
		5,440,216	08/08/95	Kim			
		5,446,356	08/29/95	Kim			
		5,498,940	03/12/96	Kim et al.			
		5,534,762	07/09/96	Kim			
		5,554,917	09/10/96	Kurz et al.			
		5,568,589	10/22/96	Hwang			
		5,613,261	03/25/97	Kawakami et al.			
		5,621,291	04/15/97	Lee			
		5,622,236	04/22/97	Azumi et al.			
		5,634,237	06/03/97	Paranjpe			
		5,664,285	09/09/97	Melito et al.			
		5,677,836	10/14/97	Bauer			
		5,682,640	11/04/97	Han			
		5,720,077	02/24/98	Nakamura et al.			
		5,787,545	08/04/98	Colens			
		5,815,880	10/06/98	Nakanishi			
		5,841,259	11/24/98	Kim et al.			
		5,894,621	04/20/99	Kubo			
		5,940,927	08/24/99	Haegermarck et al.			
		5,940,930	08/24/99	Oh et al.			
		5,942,869	08/24/99	Katou et al.			
		5,995,883	11/30/99	Nishikado			
		5,995,884	00/30/99	Allen et al.			
		6,042,656	03/28/00	Knutson			
		6,076,025	06/13/00	Ueno et al.			

U.S. PATENTS

Examiner Initial		Patent Number	Issue Date	First Named Inventor	Class	Subclass	Filing Date
		6,076,226	06/20/00	Reed			
		6,119,057	09/12/00	Kawagoe			
		6,255,793	07/03/01	Peless et al.			
		6,263,989	07/24/01	Won			
		6,323,932	11/27/01	Zhang et al.			
		6,327,741	12/11/01	Reed			
		6,338,013	01/08/02	Ruffner			
		6,339,735	01/15/02	Peless et al.			
		6,370,453	04/09/02	Sommer			
		6,389,329	05/14/02	Colens			
		6,417,641	07/19/02	Peless et al.			
		6,431,296	08/13/02	Won			
		6,457,206	10/01/02	Judson			
		6,459,955	10/01/02	Bartsch et al.			
		6,493,612	12/10/02	Bisset et al.			
		6,493,613	12/10/02	Peless et al.			
		6,508,867	01/21/03	Schoenewald et al.			
		6,519,804	02/18/03	Vujik			
		6,532,404	03/11/03	Colens			
		6,535,793	03/18/03	Allard			
		6,553,612	04/29/03	Dyson et al.			
		6,574,536	06/03/03	Kawagoe et al.			
		6,586,908	07/01/03	Petersson et al.			
		6,590,222	07/08/03	Bisset et al.			
		6,594,844	07/22/03	Jones			
		6,597,143	07/22/03	Song et al.			
		6,601,265	08/05/03	Burlington			

U.S. PATENT PUBLICATIONS					
Examiner Initial		Patent Application Publication Number	Publication Date	Applicant	
		2003/0229421	12/11/03	Chmura et al.	
PENDING U.S. PATENT APPLICATIONS					
Examiner Initial		Application Number	Filing Date	First Named Inventor	Petition to Expunge? Yes No

FOREIGN PATENT DOCUMENTS								
Examiner Initial		Document Number	Publication Date	Country	Class	Subclass	Translation Yes No	
		DE 100 00 407 A1	12/07/2001	Germany				X
		DE 100 42 753 C2	19/09/2002	Germany				X
		EP 1 133 537 A1	30/07/2003	Europe			X	
		GB 2 344 747 A	21/06/2000	United Kingdom			X	
		GB 2 344 748 A	21/06/2000	United Kingdom			X	
		GB 2 352 486 A	31/01/2001	United Kingdom			X	
		GB 2 355 523 A	05/04/2001	United Kingdom			X	
		GB 2 369 511 A	09/05/2002	United Kingdom			X	
		JP 05046246	26/02/1993	Japan				X
		JP 2002 360479	17/12/2002	Japan				X
		JP 2003 299601	21/10/2002	Japan				X
		WO 00/36968	29/06/2000	PCT			X	
		WO 00/36970	29/06/2000	PCT			X	
		WO 00/38255	29/06/2000	PCT			X	
		WO 00/73868	07/12/2000	PCT			X	
		WO 01/01208	04/01/2001	PCT			X	
		WO 01/28400	26/04/2001	PCT			X	

U.S. PATENTS

Examiner Initial	Patent Number	Issue Date	First Named Inventor	Class	Subclass	Filing Date
	6,605,156	08/12/03	Clark et al.			
	6,611,120	08/26/03	Song et al.			
	6,615,108	09/02/03	Peless et al.			
	6,615,885	09/09/03	Ohm			
	6,661,239	12/09/03	Ozick			
	6,671,592	12/30/03	Bisset et al.			

U.S. PATENT PUBLICATIONS

Examiner Initial	Patent Application Publication Number	Publication Date	Applicant
	2001/0022506	09/20/01	Peless et al.
	2001/0047895	12/06/01	DeFazio et al.
	2002/0060542	05/23/02	Song et al.
	2002/0063775	05/30/02	Taylor
	2002/0091466	07/11/02	Song et al.
	2002/0112899	08/22/02	Dijksman et al.
	2002/0120364	08/29/02	Colens
	2002/0140633	10/03/02	Rafii et al.
	2002/0153855	10/24/02	Song et al.
	2002/0025472	02/06/03	Jones et al.
	2003/0030398	02/13/03	Jacobs et al.
	2003/0039171	02/27/03	Chiapetta
	2003/0060928	03/27/03	Abramson et al.
	2003/0076484	04/24/03	Bamji et al.
	2003/0120389	06/26/03	Abramson et al.
	2003/0192144	10/16/03	Song et al.
	2003/0208304	11/06/03	Peless et al.

FOREIGN PATENT DOCUMENTS

Examiner Initial		Document Number	Publication Date	Country	Class	Subclass	Trans- lation	
							Yes	No
		WO 02/067744	06/09/2002	PCT			X	
		WO 02/075469	26/09/2002	PCT			X	
		WO 03/031285	17/04/2003	PCT			X	
		WO 03/062937	31/07/2003	PCT			X	
		WO 03/104909	18/12/2003	PCT			X	

OTHER DOCUMENTS (Include author (if any), title, publisher and place of publication, date and pertinent pages)

		"Roomba" Intelligent Floor Vac, Owners Manual; 2002 iRobot Corporation; Cover page and Contents; pp.1-18.
		Russell et al., "A Modern, Agent-Oriented Approach to Introductory Artificial Intelligence", Sun Microsystems Laboratories; (3 pages)
		Ulrich et al., "Autonomous Vacuum Cleaner"; Laboratory of Microcomputing (LAMI); Swiss Federal Institute of Technology; Abstract: pp. 1-16.
		Choset et al., "Coverage Path Planning: The Boustrophedon Cellular Decomposition"; Dept. of Mechanical Engineering, Carnegie Mellon University; Nomadic Technologies, Inc.; Abstract; (7 pages)
		JACO; Trash Retrieval Robot; University of Florida; Department of Electrical and Computer Engineering; EEL 5666; Intelligent Machine Design Laboratory; Aaron Grassian; April 29, 1997; (15 pages)
		Doty et al., "Sweep Strategies for a Sensory-Driven, Behavior-Based Vacuum Cleaning Agent"; Machine Intelligence Laboratory; University of Florida, Gainesville, FL.; AAAI 1993 Fall Symposium Series; Instantiating Real-World Agents; Research Triangle Park, Raleigh, NC; October 22-24, 1993; pp. 1-6.

Examiner

Date Considered

*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

*1 = Copy not submitted because it was submitted in prior application SN / , filed , 20 , relied on under 35 USC §120.

*2 = Copy not submitted because it was submitted in prior application SN / , filed , 20 , relied on under 35 USC §120.